Claims

1. An ion generator comprising:

a first electrode;

a second electrode;

a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode;

wherein said first electrode is one of (1)slack, (2) has curves, and (3) is coiled.

2. An ion generator comprising:

a first electrode;

a second electrode;

a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode;

wherein said first electrode is slack

3. The ion generator of claim 2 wherein said first electrode has a length at least fifteen percent greater than if the first electrode were taught.

4. The ion generator of claim 2 wherein said first electrode has a length that is about fifteen percent to thirty percent greater than if the first electrode were taught.

5. An ion generator comprising:

a first electrode;

a second electrode;

a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode;

wherein said first electrode is a coil.

6. The ion generator of claim 5 wherein said first electrode is at least two time longer than if the first electrode were taught.

7. The ion generator of claim 5 wherein said first electrode is about two to about three times longer than if the first electrode were taught.

8. An ion generator comprising:

a first electrode;

a second electrode;

a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode;

wherein said first electrode has a plurality of curves.

9. The generator of claim 8 wherein said plurality of curves are in the same plane.

10. The generator of claim 8 wherein said first electrode is at least ten percent longer than if the first electrode were taught.

11. An ion generator comprising:

a first means for providing an electrode which has an length greater than if the electrode were taught;

a second electrode; and

a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode.

12. In an ion generator comprising a first electrode and a second electrode, and a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode, the improvement including:

said first electrode being slack in order to enhanced emissivity.

13. In an ion generator comprising a first electrode and a second electrode, and a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode, the improvement including:

said first electrode including a plurality of curves in order to enhanced emissivity.

14. In an ion generator comprising a first electrode and a second electrode, and a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode, the improvement including:

said first electrode being coiled in order to enhanced emissivity.

15. A method for generating ions including the steps of:

providing a first electrode that is one of (1) slack, (2) has curves and (3) has coils

providing a second electrode; and

providing a voltage generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode.

16. The method of claim 15, including providing a first electrode that is at least fifteen percent longer than if the first electrode were taught.

17. The generator of claim 1 wherein said first electrode is an ion emitter and the second electrode is a collector of particulate matter.

18. The generator of claim 1 wherein said first electrode is positively charged and the second electrode is negatively charged.

19. The method of claim 15, including providing a first electrode that is about two to about three times longer than if the first electrode were taught.

20. A device for conditioning air including

a housing with an air inlet and an air outlet;

a first electrode;

a second electrode;

said first electrode located closer to said air inlet than said second electrode;

said second electrode located closer to said air outlet than said first electrode;

a potential generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode

to the second electrode; and

said first electrode is one of (1) slack, (2) has curves, and (3) is coiled.

21. A device for conditioning air including

a housing with an air inlet and an air outlet

a first means for providing an electrode which has an length greater than if the electrode were taught;

a second electrode;

said first electrode located closer to said air inlet than said second electrode;

said second electrode located closer to said air outlet than said first electrode; and

a potential generator electrically coupled to the first electrode and the second electrode in order, when energized, to create a flow of air in a downstream direction from the first electrode to the second electrode.

22. The generator of claim 1 wherein when said voltage generator is energized, ions are generated at said first electrode and directed toward said second electrode.

23. The ion generator of claim 1 wherein said second electrode is removable by a user for cleaning.

24. The generator of claim 1 wherein said generator is incorporated in a housing, and said housing comprises an electro-kinetic air transporter-conditioner.

25. The generator of claim 1 wherein said generator is incorporated in a housing and, said housing comprises an electro-kinetic air transporter-conditioner and said housing has a top and said second electrode is removable from said top for cleaning.

26. The generator of claim 1 wherein:

said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said second electrode is elongated and is removable from said top of said housing.

27. The generator of claim 1 wherein:

said generator is incorporated in an elongated housing with a top and, said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said second electrode is elongated and is at least partially removable from said top of said housing.

28. The generator of claim 1 wherein:

said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said second electrode is elongated and is telescopingly removable through said top of said housing.

29. A device for conditioning air, comprising:

a housing having an inlet and an outlet;

an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

a first electrode created from a wire-shaped element, and formed into a coil-shape;

a second electrode located downstream of said first electrode;

a high voltage generator electrically coupled to said first and second electrode.

30. The device as recited in claim 29, wherein said wire-shaped element has a total length two

to three times greater than the height of said first electrode.

31. The device as recited in claim 29, wherein the diameter of said coil-shape is approximately ten times greater than the diameter of said wire-shaped element.

32. The device as recited in claim 29, wherein said first electrode is an ion emitting surface, that can electrically charge particles contained within the airflow.

33. The device as recited in claim 29, wherein said second electrode has a polarity opposite of said first electrode, which second electrode collects the electrically charged particles.

34. A device for conditioning air, comprising:

a housing having an inlet and an outlet;

an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

a first electrode, created from a wire shaped element, and formed into a curved configuration;

a second electrode located downstream of said first electrode;

a high voltage generator electrically coupled to said first and second electrode.

35. The device as recited in claim 34, wherein said wire-shaped element is approximately 10-50% longer than the height of said first electrode.

36. The device as recited in claim 34, wherein said first electrode is an ion emitting surface that can electrically charge particles contained within the airflow.

36. The device as recited in claim 36, wherein said second electrode has a polarity opposite of said first electrode, which second electrode can collect the electrically charged particles.

37. The device of claim 21 wherein said housing has as top and said second electrode is removable through said top.

38. The device of claim 21 wherein said housing is an elongated freestanding housing with a top and said second electrode is removable through said top of said housing.

39. The device of claim 21 wherein said housing is an elongated housing with a top and said second electrode is removable through said top of said housing.